

Europäisches Patentamt

European Patent Office

Office européen des brevets



11) EP 1 065 725 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 19.05.2004 Bulletin 2004/21

(51) Int Cl.⁷: **H01L 27/15**, H01L 51/20, H01L 51/40, H01L 27/00

(43) Date of publication A2: 03.01.2001 Bulletin 2001/01

(21) Application number: 00113587.0

(22) Date of filing: 27.06.2000

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU

MC NL PT SE

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 28.06.1999 JP 18259899

(71) Applicant: SEL SEMICONDUCTOR ENERGY LABORATORY CO., LTD.
Atsugi-shi, Kanagawa-ken 243-0036 (JP)

(72) Inventors:

Yamazaki, Shunpei
 Atsugi-shi, Kanagawa-ken 243-0036 (JP)

Mizukami, Mayumi
 Atsugi-shi, Kanagawa-ken 243-0036 (JP)

 Konuma, Toshimitsu Atsugi-shi, Kanagawa-ken 243-0036 (JP)

(74) Representative: Grünecker, Kinkeldey, Stockmair & Schwanhäusser Anwaltssozietät Maximilianstrasse 58 80538 München (DE)

(54) Method of manufacturing an electro-optical device

(57) An object of the invention is to reduce the manufacturing cost of EL display devices and electronic devices incorporating the EL display devices.

An EL material is formed by printing in an active ma-

trix EL display device. Relief printing or screen printing may be used as the method of printing. Manufacturing steps of the EL layer is therefore simplified and reduction of manufacturing cost is devised.

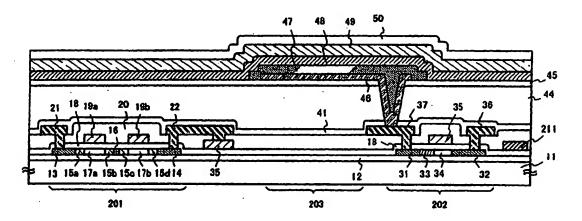


Fig. 2



EUROPEAN SEARCH REPORT

EP 00 11 3587

		ERED TO BE RELEVANT	1 5.1.	
Category	Citation of document with i	ndication, where appropriate, sages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
X	EP 0 901 174 A (SUN 10 March 1999 (1999 * page 10, paragrap * page 11, paragrap	9-03-10) ohs 72-74 *	1,6,7,9,	H01L27/15 H01L51/20
γ	page 11, paragrap		8,12,15, 16	
Υ	US 5 821 003 A (KIM 13 October 1998 (19 * column 6, line 61	98-10-13)	8,15	
X .	EP 0 880 303 A (SEI 25 November 1998 (1 * page 10, line 52- * page 11, line 1-1 * page 13, line 10- * page 14, line 17- * page 5, line 6-18 * page 6, line 11-1	998-11-25) -58 * -8 * -19 * -19 *	1-7,10	
Y	pugo 0, 12		12,16	TECHNICAL FIELDS
P,X	EP 0 954 205 A (SON 3 November 1999 (19 * page 3, paragraph * page 4, paragraph * page 5, paragraph * page 7, paragraph	199-11-03) n 17 * ns 21,23,32 * n 37 *	1,6-9, 11,13-15	SEARCHED (Int.Cl.7)
X	PATENT ABSTRACTS OF vol. 016, no. 084 (28 February 1992 (1 & JP 03 269995 A (R 2 December 1991 (19 * abstract *	E-1172), 992-02-28) ICOH CO LTD),	1,6,7	
	The present search report has	been drawn up for all claims	-	
	Place of search	Date of completion of the search	 	Examiner
	THE HAGUE	3 March 2004	Faoi	ı, M
X : parti Y : parti docu A : tech O : non-	ATEGORY OF CITED DOCUMENTS cularly relevant if taken alone cularly relevant if combined with anot ment of the same category nological background -written disclosure mediate document	E : earlier patent c after the filing o ther D : document cite L : document cite	in the application	shed on, or

EPO FORM 1503 03.82 (PO4C01)



EUROPEAN SEARCH REPORT

Application Number

EP 00 11 3587

Category	Citation of document with indicat of relevant passages	ion, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
x	PATENT ABSTRACTS OF JA vol. 1998, no. 08, 30 June 1998 (1998-06- -& JP 10 077467 A (SUM 24 March 1998 (1998-03 * abstract * * figure 1 *	30) ITOMO CHEM CO LTD),	1,6,7	
		·	-	TECHNICAL FIELDS SEARCHED (Im.Cl.7)
	e			
	The present search report has been o	drawn up for all claims		
	Place of search	Date of completion of the search		Examiner
X : parti Y : parti docu A : tech	THE HAGUE ATEGORY OF CITED DOCUMENTS iccularly relevant if taken alone cutarly relevant if combined with another innent of the same category innent of the same category modical background -written disclosure	3 March 2004 T: theory or principl E: earlier patent do after the filing da D: document cited i L: document cited to 8: member of the s	current, but publish te n the application or other reasons	rention ed on, or

EP 1 065 725 A3

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 11 3587

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

03-03-2004

	Patent documer cited in search rep		Publication date	-	Patent fan member(. Publicatio date
EP	0901174	A	10-03-1999	EP JP US	0901174 11176576 6403236	Α	10-03-199 02-07-199 11-06-200
	5821003		13-10-1998	CA	2163010	A1	21-09-199
00	3021003	,,	20 22 2000	EP	0702075	A1	20-03-199
				WO	9525149		21-09-199
				KR Tw	246496 406199		01-04-200 21-09-200
EP	0880303	 A	25-11-1998	JP	10153967		09-06-199
			•	DE	69727212		19-02-200
				EP CN	0880303 1212114		25-11-199 24-03-199
•				EP	1211916		05-06-200
				ĒΡ	1376716		02-01-200
				ΕP	1376717		02-01-200
				WO	9824271		04-06-199
				US US	2003054186 2002155215		20-03-200 24-10-200
				US	2001001050		10-05-200
			,	US	2002136823		26-09-200
		y		US	2002041926	A1	11-04-200
ΕP	0954205	Α	03-11-1999	JP Ep	11273859 0954205		08-10-199 03-11-199
 .1P	03269995	Α	02-12-1991	NONE		MZ	
JP 	10077467	A	24-03-1998	NONE			- -
٠						•	
						v	
				•			
•				•			
	4-4-4		Official Journal of the E		·	 .	·